4
THE IMPACT OF GENERAL AND MORAL COMMITMENT IN DEROGATING ATTRACTIVE ALTERNATIVES

***David Rodrigues*[1]**
Diniz Lopes
Instituto Universitário de Lisboa (ISCTE-IUL), CIS-IUL

Interpersonal relationships are an important aspect of human behavior providing security and affiliation while avoiding loneliness and social anxiety (e.g., Dwyer, 2000). In this article, we focus specifically on voluntary romantic relationships, characterized by positive affect and sexual desire (Moser, 1994). The understanding of what is a romantic relationship, as well as its governing norms, have been changing with society (e.g., marriage and divorce rates; Fletcher, Simpson, Campbell, & Overall, 2013), leading to a need for a more complete understanding of the factors promoting maintenance or break-up. In the present article we analyze the role of commitment – both general commitment and its subtype moral commitment – in relationship maintenance and, subsequently, its role in derogating attractive alternatives.

Literature has been consistent in pointing commitment as one of the most important factors in laypeople's understanding of love and happiness (Fehr, 1988, 2006) and in theoretical models of love (e.g., Sternberg, 1986, 1987). In this vein, the Investment Model (IM; Rusbult, 1980, 1983) is one of the most comprehensive models receiving empirical support in predicting stay/leave behaviors (Le & Agnew, 2003; Le, Dove, Agnew, Korn, & Mutso, 2010; Rusbult, Martz, & Agnew, 1998), and the activation of psychological stability-maintenance strategies (Rusbult & Righetti, 2009).

The IM defines commitment (hereafter referred as general commitment) as a long-term orientation to maintain the relationship, the intent to persist in it, and the experience of strong affective bonds with one's partner (Arriaga & Agnew, 2001; Rusbult, Coolsen, Kirchner, & Clarke, 2006). This in turn is influenced by satisfaction, the perception of quality among alternatives, and investments (the antecedents of general commitment; Rusbult et al., 1998). Satisfaction derives from the experience of positive affect, attraction, and the fulfillment of one's basic relational

1. Corresponding Author: David Rodrigues, ISCTE-IUL, CIS-IUL, Av. das Forças Armadas, 1649-026 Lisboa, Portugal, Email: dflrs@iscte.pt
Acknowledgements: This research was funded by the grant SFRH/BPD/73528/2010, awarded by Fundação para a Ciência e Tecnologia to the first author.

needs (e.g., intimacy). Alternatives refer to any situation other than being with the partner (e.g., being alone, with friends, family, or another lover). These alternative scenarios have higher quality to the extent that they are perceived to fulfill relational needs not currently fulfilled by the partner/relationship. Investments refer to resources applied in the relationship that would be lost or diminished if the relationship was to end. These can be intrinsic (e.g., spending time together; self-disclosure) or extrinsic (e.g., children; assets acquired together). In sum, an individual is more generally committed when he/she experiences more satisfaction with the partner and the relationship, when he/she perceives alternative situations/partners as having lesser quality and interest, and when there are more investments applied in the relationship.

Importantly to our understanding, the IM is an additive model (see Rusbult et al., 1998) and assumes that high levels of general commitment can be achieved even in the absence of one or two antecedents. Indeed, the model robustly predicts the maintenance of relationships solely based in high satisfaction (e.g., fledgling relationships; Eastwick & Finkel, 2008), or high investments (e.g., abusive relationships; Rusbult & Martz, 1995). In this latter case, individuals can endure in a relationship in which they have greatly invested, albeit not being satisfied, due to an overcompensation of the importance of investments and the perception of no other viable alternative to the current scenario. Hence, as investments rise in magnitude and assume greater importance, so does the perception of barriers to abandon the relationship and consequently the experience of general commitment.

While the theoretical conceptualization of investments encompasses intrinsic and extrinsic resources applied in the relationship (Rusbult, 1980; Rusbult & Martz, 1995), it is not clear their distinction in measurement instruments (e.g., Investment Model Scale; Rusbult et al., 1998), nor their predictive power to relationship maintenance (Goodfriend & Agnew, 2008). In trying to disentangle both types of investments, we rely on Johnson's (1991) notion of moral commitment, defined as an internal predisposition to stay morally bound to the partner. Such predisposition is influenced by personal negative attitudes towards the dissolution of the relationship, a sense of obligation and responsibility for supporting, taking care and not abandoning the partner, and personal values to maintain consistency in one's life and one's choices. In its conceptualization, the author suggests moral commitment not to be entirely correlated with general commitment (see also M. Johnson, Caughlin, & Huston, 1999). We rather argue moral commitment to comprise a subjective component of obligation within the larger general commitment construct. As such, we specifically argue that moral commitment (or the sense of being morally bound to the partner) does

not necessarily derive from satisfaction of the perception of quality among available alternatives, but from a subjective experience of intrinsic investments that promotes the perception of internal barriers to relationship abandonment. We tested this in Study 1.

Study 1

The aim of this first study is to analyze the moral commitment and its role within the IM framework. General commitment is a predisposition to maintain the relationship and resolve negative aspects that may emerge, influenced by satisfaction, quality of alternatives and investments (Le & Agnew, 2003; Rusbult, 1980, 1983). Within this larger construct, we specified moral commitment as an internal predisposition to feel morally bound to the partner (M. Johnson, 1991), possibly promoting barriers to relationship abandonment. In fact, while general commitment is associated to social support received from family and friends (Rusbult et al., 1998), moral commitment is associated to religiosity (M. Johnson et al., 1999) and is correlated with investments (Lopes & Rodrigues, 2013).

Resorting to structural equations modeling, we tested the hypothesis that moral commitment is part of the larger general commitment construct, specifically associated with intrinsic investments applied in the relationship. To support the notion that moral commitment is directly related with intrinsic, rather than extrinsic, investments, we additionally tested the direct impact of marital status and children (extrinsic investments) in moral commitment.

Method

Participants

A total of 584 participants (75.7% female) with ages varying from 18 to 62 years (M = 29.11, SD = 8.16) took part in this study. Participants were mainly from urban areas (92.1%), with BA (50.3%) or Master/PhD (34.1%) degrees.

All participants were in a romantic relationship, 20.2% of which were married (M_{Duration} = 154.76 months, SD = 98.60) and 79.8% were unmarried (M_{Duration} = 45.30 months, SD = 40.67). Participants perceive their romantic relationship to have good acceptance and support from family and friends (M = 6.15, SD = 1.08, in a scale from 1 = *Low support* to 7 = *High support*). Also, 20.7% of our participants indicated to have at least one child (Married = 71.2%; Unmarried = 7.9%), and half (50.7%) indicated to be religious (Catholic; Married = 66.1%; Unmarried = 46.8%).

Measures

Investment model scale (IMS). We used the Portuguese version of the IMS (Rodrigues & Lopes, 2013; Rusbult et al., 1998). Five items comprise each antecedent's subscale – satisfaction (α = .90, e.g., *I feel satisfied with our relationship*), quality of alternatives (α = .83, e.g., *The people other than my partner with whom I might become involved are very appealing*), and investment size (α = .81, e.g., *I have invested a great deal of time in our relationship*) –, and seven items comprise the commitment subscale (α = .89, e.g., *I want our relationship to last for a very long time*). Responses were given in seven-point scales (from 1 = *Do not agree at all* to 7 = *Agree completely*).

Moral commitment. We used the Portuguese version of the moral commitment scale (M. Johnson et al., 1999; Lopes & Rodrigues, 2013), comprising nine questions (α = .76) divided in three components: (a) perception of a moral contract with one's partner (five items; α = .81; e.g., *You could never leave [partner's name] because you would feel guilty about letting [him/her] down*), (b) one's consistency values (two items; r_p = .43; e.g., *Whenever you promise to do something, you should see it through*) and (c) one's attitudes towards separation (two items; r_p = .34; e.g., *It's all right to get a divorce if things are not working out*). The average of means across these three components results in a mean moral commitment score. Responses were given in seven-point scales (1 = *Do not agree at all* to 7 = *Agree completely*).

Other measures. Additionally, we asked participants to indicate: (a) their sex (male/female/transgender), (b) their age (in years), (c) their marital status (unmarried/married), (d) the length of their relationship (in months), (e) if they have children (yes/no), (f) if they profess a religion (no/yes), and (g) how much their family and friends support their current romantic relationship (1 = *Low support* to 7 = *High support*).

Procedure

All measures were inserted into Qualtrics® web platform, and the resulting hyperlink for the on-line questionnaire was published in social network sites (e.g., Facebook®) and sent by e-mail to mailing lists. By clicking on the hyperlink, participants were informed they would be taking part in a study about personal relationships, specifically on the dynamics established between partners in a romantic relationship. It was explicitly stated that they were allowed to abandon the questionnaire at any point in time. The questionnaire started with a set of questions to characterize the sample of participants, followed by the IMS and moral commitment scales, presented in random order. At the end, participants saw a screen thanking their collaboration, and were given an email address to contact the research

team to either obtain further information or place further questions and/or comments regarding the study. There was no time limit to complete the questionnaire, and the mean time of response was about 15 minutes.

Results and Discussion

According to our rationale, we hypothesized moral commitment to be part of the general commitment construct, specifically associated with intrinsic investments. We computed a structural equations model to test if: (1) social support from family and friends are associated to satisfaction, quality of alternatives and investments (the antecedents of general commitment; cf. Rusbult et al., 1998), (2) satisfaction, quality of alternatives and investments are associated to general commitment, (3) marital status (unmarried vs. married), profession of a religion (no vs. yes), and children (no vs. yes) are associated to moral commitment, and (4) moral commitment is associated to investments. To do so, we used M-plus (Muthén & Muthén, 2010) and both relative and absolute goodness of fit indexes were obtained: (a) chi-squared statistic, (b) comparative fit index (CFI), (c) Tucker–Lewis Index (TLI), (d) root mean square error of approximation (RMSEA), and (e) standardized root mean squared residual (SMSR). This model was estimated using maximum likelihood estimation with the Yuan–Bentler correction for skewness (MLR; Muthén & Muthén, 2010).

Based on the standards established in literature for fit indexes (Bentler, 1990; Browne & Cudeck, 1989; Jöreskog & Sörbom, 1984), this model presents a good fit to our data, $\chi^2 = 1511.94$, $\chi^2/df = 2.20$, CFI = .92, TLI = .91, RMSEA = .05 (CI: .04; .05) and SRMR = .08. On the one hand, general commitment appears associated to satisfaction ($\gamma = .65$), quality of alternatives ($\gamma = -.20$) and investments ($\gamma = .18$), while social support is only associated to satisfaction ($\gamma = .39$) and quality of alternatives ($\gamma = -.25$). On the other hand, religiousness is only associated to moral commitment ($\gamma = .13$), which in turn associates to investments ($\gamma = .54$).

Important to our argumentation are additional evidences showing that: (1) neither marital status nor children had a direct association to moral commitment, (2) religiousness had no direct association to investments, and (3) moral commitment had no direct association to general commitment.

Taken together, these results support the notion of moral commitment as part of general commitment, but specifically qualified by the perception of intrinsic investments. Indeed, moral commitment was associated to religiosity, and not to marital status or the existence of children (forms of extrinsic investments), suggesting moral commitment as a distinct subtype of general commitment, at least in terms of its subjective

experience. General commitment is the broader experience of attachments and willingness to stay with one's partner and in one's relationship, including the notion of moral commitment. The sense of moral commitment and obligation to stay in the relationship, however, stems specifically from personal attitudes defined by norms and conventions, and associates to the perception of intrinsic investments and intrapersonal barriers to abandon the relationship.

By showing the importance of moral commitment as an additional piece of information to further understand romantic relationships, we sought to understand its impact in preserving relationship stability when faced with a potential threat. Literature shows that, in a situation perceived as a possible threat to the relationship's stability, general commitment triggers the activation of strategies aimed at restoring such stability, including accommodation (rather than retaliation), willingness to sacrifice over the situation, comprehend, justify and/or forgive the partner, derogate potential alternatives, or engage in the construction of positive illusions towards the partner and/or relationship (for an overview, see Rusbult & Righetti, 2009). Given that moral commitment refers to a predisposition/obligation to stay with one's partner, associated with intrinsic investments and the perception of internal barriers, it should also trigger relationship protection strategies. We analyze this in greater detail in Study 2.

Study 2

In this second study we focus specifically the derogation of alternatives, whereby individuals in a romantic relationship perceive attractive others as being less attractive, and spend a lesser amount of time attending to him/her (e.g., Finkel, Molden, Johnson, & Eastwick, 2009; D. Johnson & Rusbult, 1989; Miller, 1997; Rodrigues & Garcia-Marques, 2005; Simpson, Gangestad, & Lerma, 1990). However, more recent empirical evidences show that derogation is dependent upon the levels of commitment and perceived threat posed by the alternative. Specifically, the calibration hypothesis (Lydon, Fitzsimons, & Naidoo, 2003; Lydon, Meana, Sepinwall, Richards, & Mayman, 1999) states that derogation occurs only when commitment and threat levels are similar. In this sense, highly committed individuals tend to derogate attractive targets otherwise not perceiving threat (e.g., unattractive target), while low committed individuals tend to succumb to the attractive target (more positive judgments).

Given that derogation is usually analyzed considering the level of general commitment (e.g., D. Johnson & Rusbult, 1989), in this study we aim at extending our understanding to moral commitment and its role in derogating alternatives. Specifically, we analyze the impact of a low/high

general and moral commitment in the attraction reported towards an alternative other. By showing participants the photo of a target (unattractive/attractive), we manipulate the perception of threat to relationship stability (lower/higher), and expect individuals in a committed relationship (vs. singles without a relationship) to derogate the attractive target, that is, report less attraction towards the target. For the unattractive target we expect no differences according to relationship status.

Among individuals in a committed romantic relationship, and taking into account the calibration hypothesis, we also expect highly (vs. low) general and moral committed individuals to derogate the attractive (vs. unattractive) target (perception of higher threat), while low general and moral committed individuals should succumb and report higher attraction for the attractive (vs. unattractive) target. No differences are expected for the unattractive target. We additionally explored the interplay between levels of (high/low) general commitment and (high/low) moral commitment in impacting attraction scores towards the unattractive and the attractive targets.

Method

Participants

One hundred and thirty six Portuguese individuals (69.1% female, M_{Age} = 20.44, *SD* = 3.12) took part in this study. Half of our participants were single and not romantically involved (49.3%), while the remaining indicated to be single in a committed romantic relationship (50.7%, $M_{Duration}$ = 20.33 months, *SD* = 19.27).

Instruments

Attraction. We used five items (α = .96, e.g., *I would like to invite this person for a date*) commonly used by researchers in this area (see Rodrigues, 2010; Rodrigues & Garcia-Marques, 2005). Responses were given in seven-point scales (1= *Not at all* to 7= *A lot*).

General commitment. We used the short version of the commitment subscale from the Portuguese version of the Investment Model Scale (Rodrigues & Lopes, 2013; Rusbult et al., 1998). Four items comprise this subscale (α = .89, e.g., *I want our relationship to last for a very long time*) and responses were given in seven-point scales (from 1 = *Do not agree at all* to 7 = *Agree completely*).

Moral commitment. We used the Portuguese version of the moral commitment scale (M. Johnson et al., 1999; Lopes & Rodrigues, 2013), comprising nine questions (α = .76) divided in three components: (a) perception of a moral contract with one's partner (five items; α = .81; e.g.,

You could never leave [partner's name] because you would feel guilty about letting [him/her] down), (b) one's consistency values (two items; r_p = .43; e.g., *Whenever you promise to do something, you should see it through*) and (c) one's attitudes towards separation (two items; r_p = .34; e.g., *It's all right to get a divorce if things are not working out*). The average of means across components results in a mean moral commitment score. Responses were given in seven-point scales (1= *Do not agree at all* to 7= *Agree completely*).

Procedure

All measures were inserted into Qualtrics web platform (www.qualtrics.com), and the resulting hyperlink for the on-line questionnaire was published in social network sites (e.g., www.facebook.com) and sent by e-mail to mailing lists. By clicking on the hyperlink, participants were informed they would be taking part in a study about interpersonal relationships. It was explicitly stated that they were allowed to abandon the questionnaire at any point in time, simply by closing the web browser. Participants were first presented with set of control questions (e.g., sex, age, relationship status), followed by one of two photos depicting the headshot of a target (attractive or unattractive; for details see Rodrigues, 2010) and the attraction measure. Participants who were in a committed relationship were then presented with the general and moral commitment scales (presented in random order). At the end, all participants saw a screen thanking their collaboration with an email address to contact the research team if necessary. There was no time limit to complete the questionnaire and mean time of response was about 15 minutes.

Results and Discussion

Recall that we expected committed (vs. single) individuals to engage in derogation towards the attractive (vs. unattractive) target and report less attraction. A 2 Relationship status (single vs. committed) x 2 Target (unattractive vs. attractive) ANOVA supports our hypothesis. As expected, we found main effects of relationship status, F (1, 132) = 7.58, MSE = 4.93, p = .007, η^2_p = .05, and target's attractiveness, F (1, 132) = 24.19, MSE = 15.73, p < .001, η^2_p = .15, in attraction scores. More importantly, and converging with our hypothesis, a significant Relationship Status x Target interaction also emerged, F (1, 132) = 5.60, MSE = 3.64, p = .019, η^2_p = .04. Planned contrasts show that whereas scores for the unattractive target were no different between committed (M = 1.10) and single participants (M = 1.16), t (132) = -.28, p = .784, committed participants reported significantly

lower attraction for the attractive target (M = 1.46) than single participants (M = 2.17), t (132) = -3.60, $p < .001$, d = -.63.

To analyze more specifically the role of general and of moral commitment in activating derogation, we focused our analysis on participants in a committed relationship. High (vs. low) general and moral committed participants were expected to derogate the attractive (vs. unattractive) target, whereas low general and moral committed individuals were expected to report higher attraction towards the attractive target. General commitment scores were median split into low (≤ 6.5) and high (> 6.5). A 2 General commitment (low vs. high) x 2 Target (unattractive vs. attractive) ANOVA revealed main effects for general commitment, F (1, 65) = 5.75, MSE = 1.75, p = .019, η^2_p = .08, and target's attractiveness, F (1, 65) = 4.14, MSE = 1.26, p = .05, η^2_p = .06, as well as the interaction between these factors, F (1, 65) = 4.84, MSE = 1.47, p = .03, η^2_p = .07. Planned contrasts show that while no differences emerged for the unattractive target when comparing high (M = 1.09) and low (M = 1.12) general committed participants, t (65) = -.15, p = .883, high general committed participants reported less attraction for the attractive target (M = 1.07) when compared to low general committed participants (M = 1.69), t (65) = -3.09, p = .003, d = -.78.

Moral commitment scores were also median split to reflect low (≤ 3.67) or high moral commitment (> 3.67). Similarly to our previous results, a 2 Moral commitment (low vs. high) x 2 Target (unattractive vs. attractive) ANOVA revealed main effects of moral commitment, F (1, 65) = 7.16, MSE = 2.15, p = .009, η^2_p = .10, and target's attractiveness, F (1, 65) = 4.00, MSE = 1.12, p = .05, η^2_p = .06, as well as the expected interaction between the factors, F (1, 65) = 4.61, MSE = 1.38, p = .035, η^2_p = .07. Planned contrasts show no differences for the unattractive target between high (M = 1.07) and low (M = 1.14) moral committed participants, t (65) = -.39, p = .695, while high moral committed participants reported less attraction for the attractive target (M = 1.05) in comparison with low moral committed participants (M = 1.70), t (65) = -3.25, p = .002, d = -.81.

To explore the impact of general and moral commitment in activating derogation, we computed a 2 General commitment (low vs. high) x 2 Moral commitment (low vs. high) x 2 Target (unattractive vs. attractive) ANOVA and a marginal three-way interaction emerged, F (1, 61) = 2.96, MSE = .83, p = .090, η^2_p = .05. Planned contrasts for the attractive target show no differences in attraction among high general committed participants, regardless being high (M = 1.02) or low (M = 1.12) morally committed to their partner, t (61) = -.29, p = .769. Among low general committed participants, however, those also low morally committed reported higher attraction (M = 1.83) compared to highly morally

committed (M = 1.08), t (61) = 2.97, p = .004, d = .70. No differences were found for the unattractive target, all t < 1.

General Discussion

In this article we sought to understand the role of moral commitment as a part of the general commitment construct, specifically related to internal investments, and to explore the interplay between moral and general commitment in activating derogation as a relationship protection mechanism. These aims were driven by the lack of clarity of some measurement instruments of commitment in distinguishing intrinsic and extrinsic investments in the relationship, and also to disentangle the role of both type of investments in predicting relationship maintenance.

Results from Study 1 converge with our notion of moral commitment as an important subtype of investments that can help us better understand the dynamics underlying romantic relationships. On the one hand, general commitment is a broader experience of willingness to stay with one's partner and relationship, dependent upon personal willingness to be focused and motivated in maintaining the relationship and social support received from family and friends and the perception of internal/external barriers drawn from investments (Le & Agnew, 2003; Rusbult et al., 1998). Moral commitment, on the other hand, is experienced as an obligation stemming from personal attitudes influenced by norms and conventions (M. Johnson, 1991; M. Johnson et al., 1999), influenced by religiosity but not by marital status or the existence of children. Hence, moral commitment emerges as a form of intrinsic investment, associated with an intrapersonal experience of barriers to abandon the relationship. In this vein, our results support the claims suggesting moral commitment as distinct and related to internal barriers, not specifically assessed by the commonly used measure of general commitment (i.e., IMS; Rusbult et al., 1998). Indeed, moral commitment was not directly associated to general commitment, and appeared linked to religiosity, but not to marital status or the existence of children (forms of extrinsic investments). Results regarding general commitment replicated those expected by Rusbult's Investment Model (Le & Agnew, 2003; Rusbult et al., 1998), that is, general commitment associated with satisfaction, quality of alternatives, and investments.

Building upon these evidences, Study 2 sought to analyze the role of general and moral commitment in influencing the activation of relationship protection behaviors, specifically derogation of an alternative other. Literature shows high general committed (vs. low general committed and single) individuals to devaluate the attractiveness of a given alternative, especially when such alternative is perceived as a threat to the stability of

the relationship (e.g., D. Johnson & Rusbult, 1989; Lydon et al., 1999; Rusbult & Buunk, 1993; Simpson et al., 1990). Being moral commitment an internal predisposition to stay in the relationship tied to intrinsic investments, a high moral commitment should trigger a similar behavior as a mean to protect the stability of the relationship.

Our results converge with main findings reported in the literature (e.g., D. Johnson & Rusbult, 1989; Rodrigues & Garcia-Marques, 2005; Simpson et al., 1990), as committed (vs. single) individuals reported less attraction for the attractive alternative other. Also, the fact that no differences between single and committed individuals emerged for the unattractive target is in line with the calibration hypothesis (Lydon et al., 2003, 1999), that is, the unattractive target was not perceived as a threat. On the contrary, the attractive target was perceived as a threat within committed (vs. single) individuals, leading to derogation and lower reported attraction as a means to protect the stability of the relationship.

Analyzing in greater detail the distinction between high and low commitment, we also found support for the calibration hypothesis, as highly committed individuals evidenced derogation towards the attractive target (high perceived threat), contrarily to low committed individuals that reported a higher attraction towards the target (succumb to the threat). Not only we replicated this effect with general commitment (Johnson & Rusbult, 1989), but more importantly we extended our knowledge by showing the calibration hypothesis when considering high/low moral commitment.

Equally important are the evidences showing that, when individuals have a low general commitment towards the partner, they can still experience a high moral commitment and thus engage in derogation of an attractive alternative other. However, when individuals experience low general and low moral commitment, they seem to succumb to their attraction towards the attractive target.

Future studies should address these questions in greater detail, namely taking into account types of romantic relationship not based on prevailing heterosexist, monogamic and procreation norms, linked with religiosity and Catholicism. This would allow us to broaden the understanding of romantic relationships developed under more specific and custom-made norms (e.g., romantic relationships where both partners agree with extra-dyadic sex).

Also, future studies should enlarge the scope of the construct of moral commitment, namely by making it less entangled in marriage and Christian values. In fact, and despite the results previously presented generally support our claims, we aim at proposing a restructuring of the

moral commitment construct by adding more culturally free dimensions less linked with catholic values and marriage/divorce attitudes.

In sum, this research is a first effort in bringing to light the importance of considering moral commitment as a subtype of general commitment. Not only it is a distinct experience of commitment not fully assesses by commonly used measures of general commitment, it is also a fundamental aspect of the experience of commitment that can trigger the activation of derogation (even in the absence of general commitment).

Notes

(1) We argued moral commitment to differ from general commitment construct, and showed its impact on general commitment to occur via investments. This could suggest moral commitment to be functionally similar to investments in regards to the activation of the derogation behavior. Investments scores were median split into low (≤ 4) and high (> 4), and in line with our reasoning a 2 Investments (low vs. high) x 2 Target (unattractive vs. Attractive) ANOVA show neither a main effect of investments, nor an interaction between factors, both $F < 1$. Hence, although moral investments refer to a form of investments, it is a distinct intrapersonal experience (for a discussion see Rodrigues & Lopes, 2013).

References

Arriaga, X., & Agnew, C. (2001). Being committed: Affective, cognitive, and conative components of relationship commitment. *Personality and Social Psychology Bulletin*, *27*, 1190–1203. doi:10.1177/0146167201279011

Bentler, P. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*, 238–246. doi:10.1037/0033-2909.107.2.238

Browne, M., & Cudeck, R. (1989). Single sample cross-validation indices for covariance structures. *Multivariate Behavioral Research*, *24*, 445–455. doi:10.1207/s15327906mbr2404_4

Dwyer, D. (2000). *Interpersonal relationships*. London: Routledge. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=60984

Eastwick, P., & Finkel, E. (2008). The attachment system in fledgling relationships: An activating role for attachment anxiety. *Journal of Personality and Social Psychology*, *95*, 628–647. doi:10.1037/0022-3514.95.3.628

Fehr, B. (1988). Prototype analysis of the concepts of love and commitment. *Journal of Personality and Social Psychology*, *55*, 557–579. doi:10.1037/0022-3514.55.4.557

Fehr, B. (2006). A prototype approach to studying love. In R. Sternberg & K. Weis (Eds.), *The new psychology of love* (pp. 225–246). CT: Yale University Press.

Finkel, E., Molden, D., Johnson, S., & Eastwick, P. (2009). Regulatory focus and romantic alternatives. In J. Forgas, R. Baumeister, & D. Tice (Eds.), *Self-regulation: Cognitive, affective, and motivational processes* (pp. 319–335). NY: Psychology Press.

Fletcher, G., Simpson, J., Campbell, L., & Overall, N. (2013). *The science of intimate relationships*. NY: Wiley-Blackwell.

Goodfriend, W., & Agnew, C. (2008). Sunken costs and desired plans: Examining different types of investments in close relationships. *Personality and Social Psychology Bulletin*, *34*, 1639–1652. doi:10.1177/0146167208323743

Johnson, D., & Rusbult, C. (1989). Resisting temptation: Devaluation of alternative partners as a means of maintaining commitment in close relationships. *Journal of Personality and Social Psychology*, *57*, 967–980. doi:10.1037/0022-3514.57.6.967

Johnson, M. (1991). Commitment to personal relationships. In W. Jones & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 3, pp. 117–143). London: Jessica Kingsley.

Johnson, M., Caughlin, J., & Huston, T. (1999). The tripartite nature of marital commitment: Personal, moral, and structural reasons to stay married. *Journal of Marriage and the Family*, *61*, 160. doi:10.2307/353891

Jöreskog, K., & Sörbom, D. (1984). *LISREL 6: User's guide*. IN: Scientific Software International.

Le, B., & Agnew, C. (2003). Commitment and its theorized determinants: A meta–analysis of the Investment Model. *Personal Relationships*, *10*, 37–57. doi:10.1111/1475-6811.00035

Le, B., Dove, N., Agnew, C., Korn, M., & Mutso, A. (2010). Predicting nonmarital romantic relationship dissolution: A meta-analytic synthesis. *Personal Relationships*, *17*, 377–390. doi:10.1111/j.1475-6811.2010.01285.x

Lopes, D., & Rodrigues, D. (2013). *Validation of the Measurement of Components of Commitment scale: Extending results and gathering further psychometric evidence*. Unpublished manuscript, Instituto Universitário de Lisboa (ISCTE-IUL), Lisbon, Portugal.

Lydon, J., Fitzsimons, G., & Naidoo, L. (2003). Devaluation versus enhancement of attractive alternatives: A critical test using the calibration paradigm. *Personality and Social Psychology Bulletin*, *29*, 349–359. doi:10.1177/0146167202250202

Lydon, J., Meana, M., Sepinwall, D., Richards, N., & Mayman, S. (1999). The commitment calibration hypothesis: When do people devalue attractive alternatives? *Personality and Social Psychology Bulletin*, *25*, 152–161. doi:10.1177/0146167299025002002

Miller, R. (1997). Inattentive and contented: Relationship commitment and attention to alternatives. *Journal of Personality and Social Psychology*, *73*, 758–766. doi:10.1037/0022-3514.73.4.758

Moser, G. (1994). *Les relations interpersonnelles*. Paris: Presses Universitaires de France.

Muthén, L., & Muthén, B. (2010). *Mplus user's guide* (6th ed.). CA: Muthén & Muthén.

Rodrigues, D. (2010). *"Só de olhar para ti…": O fenómeno de atracção inicial ["Just by looking at you…": The initial attraction phenomenon]*. Unpublished doctoral dissertation, Instituto Universitário de Lisboa (ISCTE-IUL), Lisbon, Portugal.

Rodrigues, D., & Garcia-Marques, T. (2005). Marquemos o encontro ao cimo da escada: O papel da activação fisiológica na atracção interpessoal [Let's meet at the top of the stairs: The role of arousal in interpersonal attraction]. *Análise Psicológica*, *23*, 427–436.

Rodrigues, D., & Lopes, D. (2013). The Investment Model Scale (IMS): Further sudies on construct validation and development of a shorter version (IMS-S). *The Journal of General Psychology*, *140*, 16–28. doi:10.1080/00221309.2012.710276

Rusbult, C. (1980). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology*, *16*, 172–186. doi:10.1016/0022-1031(80)90007-4

Rusbult, C. (1983). A longitudinal test of the Investment Model: The development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology*, *45*, 101–117. doi:10.1037/0022-3514.45.1.101

Rusbult, C., & Buunk, B. (1993). Commitment processes in close relationships: An interdependence analysis. *Journal of Social and Personal Relationships*, *10*, 175–204. doi:10.1177/026540759301000202

Rusbult, C., Coolsen, M., Kirchner, J., & Clarke, J. (2006). Commitment. In A. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 615–635). NY: Cambridge.

Rusbult, C., & Martz, J. (1995). Remaining in an abusive relationship: An Investment Model analysis of nonvoluntary dependence. *Personality and Social Psychology Bulletin*, *21*, 558–571. doi:10.1177/0146167295216002

Rusbult, C., Martz, J., & Agnew, C. (1998). The Investment Model Scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, *5*, 357–387. doi:10.1111/j.1475-6811.1998.tb00177.x

Rusbult, C., & Righetti, F. (2009). Investment Model. In H. Reis & S. Sprecher (Eds.), *Encyclopedia of human relationships* (Vol. 2, pp. 927–930). CA: Sage.

Simpson, J., Gangestad, S., & Lerma, M. (1990). Perception of physical attractiveness: Mechanisms involved in the maintenance of romantic relationships. *Journal of Personality and Social Psychology*, *59*, 1192–1201. doi:10.1037/0022-3514.59.6.1192

Sternberg, R. (1986). A triangular theory of love. *Psychological Review*, *93*, 119–135. doi:10.1037/0033-295X.93.2.119

Sternberg, R. (1987). Liking versus loving: A comparative evaluation of theories. *Psychological Bulletin*, *102*, 331–345. doi:10.1037/0033-2909.102.3.331